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IS 8568 (1993) : Textile machinery and accessories - Pirl winding machines - Vocabulary [TXD 14: Machinery for Fabric Manufacture]

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**“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”**

Bhartṛhari—Nītiśatakam

“Knowledge is such a treasure which cannot be stolen”





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वस्त्रादि मशीनरी एवं सहायकांग – पर्न कुंडलन मशीनें –  
शब्दावली

( पहला पुनरीक्षण )

*Indian Standard*

TEXTILE MACHINERY AND ACCESSORIES — PIRN  
WINDING MACHINES — VOCABULARY

( *First Revision* )

UDC 677.053.23 : 001.4

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## NATIONAL FOREWORD

This Indian Standard which is identical with ISO 476-1982 'Textile machinery and accessories—Pirn winding machines—Vocabulary' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Machinery for Fabric Manufacture (Excluding Knitting) Sectional Committee and approval of the Textile Division Council.

In this standard certain terminology and conventions are not identical with those used in Indian Standards; attention is particularly drawn to the following:

Wherever the words 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'.

In this Indian Standard, the following international standards are referred to. Read in their respective place the following:

<i>International Standard</i>	<i>Indian Standard</i>
ISO 1809, Textile machinery and accessories—Types of formers for yarn packages—Nomenclature	IS 10310 : 1982 Nomenclature for formers for yarn packages ( Technically equivalent )
ISO 5238/1, Textile machinery and accessories—Packages for yarns and intermediate products—Part 1 : Terminology	IS 13865 ( Part 1 ) : 1993 Textile machinery and accessories—Packages for yarns and intermediate products : Part 1 Terminology ( Identical )
ISO 5239, Textile machinery and accessories—Winding—Basic Terms	IS 13866 : 1993 Textile machinery and accessories—Winding—Basic terms ( Identical )

The French, Russian, German and Italian text has been deleted while adopting this International Standard.

## *Indian Standard*

# TEXTILE MACHINERY AND ACCESSORIES — PIRN WINDING MACHINES — VOCABULARY ( *First Revision* )

### **0 Introduction**

The terms and expressions presented in this International Standard, and such definitions as are included, take into account the development discernible for some years in the field of utilization of automatic pirn winding machines. In effect the majority of pirn winding machines currently used in the textile industry are automatic and use of these is extensive in the production of packages of all types and in certain cases is impinging on the role of the cone or cheese winding machine.

### **1 Scope and field of application**

This International Standard establishes a list of basic terms used in the designation of pirn winding machines and of their accessories as well as certain corresponding definitions, in the field of terminology for weaving preparatory machinery.

**NOTE** — In addition to terms used in the three official ISO languages ( English, French and Russian ), this International Standard defines ( in an annex ) the equivalent terms in German and Italian languages; these have been included for information at the request of Technical Committee ISO/TC 72, and the member bodies for Germany F.R. ( DIN ), Switzerland ( SNV ) and Italy ( UNI ) have verified their correctness. However, only the terms given in the official languages can be considered as ISO terms and definitions.

### **2 References**

ISO 1809, *Textile machinery and accessories — Types of formers for yarn packages — Nomenclature*.

ISO 5238/1, *Textile machinery and accessories— Packages for yarns and intermediate products — Part 1 : Terminology<sup>1)</sup>*.

ISO 5239, *Textile machinery and accessories — Winding — Basic terms*.

### **3 General terms and definitions**

**3.1 pirn winding machine** : A machine designed to wind yarn onto pirns for fitting

automatically or otherwise into the shuttle of a weaving machine.

**3.1.1 non-automatic pirn winding machine** : Pirn winding machine in which the changing of the pirn ( replacement of the full pirn by an empty pirn ) is done manually ( in practice the qualification 'non-automatic' is generally omitted ).

**3.1.2 semi-automatic pirn winding machine** : A pirn winding machine in which the empty pirn is donned manually but the full pirn is doffed automatically.

**3.1.3 automatic pirn winding machine** : A pirn winding machine in which the changing of the pirn is automatic.

**3.2 pirn winding head** : A unit assembly on the winding machine which serves for the production of:

- a single pirn ( incorporating a single pirn holder or single spindle );
- several pirns simultaneously ( incorporating a multiple pirn holder or multiple spindle ), for example; a pirn holder with two spindles.

**NOTE** — In the case of pirn winding at the weaving machine this term designates an attachment on a weaving machine which effects the production of all the pirns used by the weaving machine.

#### **3.2.1 location of the pirn**

( for winding of yarn ):

- upon a spindle invariably ( only on non-automatic machines );
- between locating devices or clamps ( with centring elements or similar devices ).

#### **3.2.2 feeding the pirn for winding :**

- manual;
- by means of an automatic device for transferring the empty pirn from the

1) At present at stage of draft.

waiting position into its winding position. In the case of 'multiple-spindle' mechanisms, the device transfers the number of empty pirns corresponding to the number of winding positions on the head.

**3.2.3 device for the formation of the reserve wind or bunch :**

- the reserve or bunch at the base of the pirn ( towards the machine );
- the reserve or bunch at the tip of the pirn ( towards the operator ).

**3.2.4 device for automatic cutting ( of yarn at full pirn ) :** A device serving to cut the yarn at the pirn changing point on automatic machines.

**3.2.5 yarn guide :** An element whose function is to ensure, without detriment to the yarn:

- the guidance of the yarn and the application of pressure ( tension ) to the package;
- the guidance of yarn only ( eg : winding with pressure roller ).

**3.2.6 yarn guide traverse mechanism ( single, double or multiple ) :** A mechanism to impart movement to the yarn guide ( imparting to it a displacement as required ) by one of the following systems:

**3.2.6.1 mechanical;**

**3.2.6.2 hydraulic;**

**3.2.6.3 electro-mechanical or electronic.**

**3.2.7 wind ratio mechanism :** A device permitting the setting of the wind ratio.

**3.2.8 traverse displacement device :** A device for ensuring the displacement of the traverse made by the yarn guide.

NOTE — The function of this device is modified for the production of all other types of package.

#### 4 Additional devices

**4.1 yarn tension device :** A device to impart to the yarn a suitable tension for obtaining the desired form of package and, to a certain extent, the desired hardness of the wound package.

The principal types are:

- 4.1.1 gate type;**
- 4.1.2 pinch type;**
- 4.1.3 friction brake ( wheel friction driven by the yarn ).**

NOTE — Tensioners may include the following supplementary devices : yarn clearers, stop motions, tension compensators.

**4.2 yarn clearer :** A device intended to detect and eliminate yarn faults ( slubs, large knots, etc. ).

The principal types are based on these systems:

**4.2.1 mechanical;**

**4.2.2 electronic.**

**4.3 stop motion :** Device to stop the winding spindle ( or spindles ) in the absence of yarn supply by means of:

**4.3.1 a mechanical system;**

**4.3.2 an electronic system.**

**4.4 tension compensator :** A device allowing the tension imparted to the yarn by the tensioner to be maintained constant or to be reduced during the pirn winding operation.

**4.5 yarn feeding device :** An assembly, free to rotate, and designed to reduce the tendency to "snatch" when unwinding the creel package.

**4.6 supply yarn creel**

**4.6.1 for unwinding overend :** Stationary spindles or pegs to hold the supply packages.

**4.6.2 for unwinding from the side :** Spindles, mandrels or other rotating parts to hold the supply packages.

**4.7 measuring device**

**4.7.1 full pirn stop motion :** A device to stop the winding when the pirn attains the pre-determined length. This stop motion can, in certain cases, engage the tip bunching mechanism or the pirn changing mechanism.

**4.7.2 pre-determined length counter :** A device to stop the winding when the length of yarn wound attains the pre-set value.

**4.8 yarn finishing applicator :** A device designed to impart to the yarn a particular condition depending upon the use to which it is to be put. The details of the relevant types depend upon whether the finish to be applied to the yarn is in liquid or solid form.

**4.8.1 waxing attachment :** A device to apply paraffin to the yarn during winding.

**4.8.2 applicator roller :** A roller to apply lubricating fluid to the yarn during winding.

## 5 Accessories

### 5.1 Pirn tray for holding empty pirns

With automatic arrangement of the pirns or otherwise.

### 5.2 Pirn tray for holding full pirns

With automatic arrangement of the pirns or otherwise.

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